



# MATERIAL SAFETY DATA SHEET

Syrgis Performance  
Initiators, Inc.  
Helena, AR

## NOROX<sup>®</sup> 415

### SECTION 1 - IDENTIFICATION OF THE PRODUCT AND THE COMPANY

<b>PRODUCT NAME</b>	<b>NOROX<sup>®</sup> 415</b>	<b>TELEPHONE</b>	870-572-2935
<b>MANUFACTURER</b>	Syrgis Performance Initiators, Inc.	<b>CHEMTREC (24hr) (USA)</b>	800-424-9300
<b>ADDRESS</b>	334 Phillips 311 Rd., Helena, AR 72342	<b>(Maritime/International)</b>	703-527-3887
<b>CHEMICAL NAME</b>	2,5-Dimethyl-2,5-di(2-ethylhexanoylperoxy)hexane	<b>CAS NO.</b>	See Section 2
<b>CHEMICAL FAMILY</b>	Organic Peroxide - Peroxyester	<b>CHEMICAL FORMULA</b>	C <sub>24</sub> H <sub>46</sub> O <sub>6</sub>

### SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>COMPONENTS</u>	<u>CAS NO.</u>	<u>%</u>
2,5-Dimethyl-2,5-di(2-ethylhexanoylperoxy)hexane	13052-09-0	technically pure

### SECTION 3 - HAZARD IDENTIFICATION OF THE PREPARATION

<b>PHYSICAL HAZARDS</b>	Organic Peroxide. Decomposition.
<b>HEALTH HAZARDS</b>	Irritant.
<b>EXPOSURE LIMITS</b>	No exposure limits have been established.
<b>ROUTES OF EXPOSURE</b>	
<b>Skin Contact</b>	Prolonged contact may cause mild to moderate skin irritation including redness and dry
<b>Eye Contact</b>	May cause mild to moderate irritation of the eyes.
<b>Ingestion</b>	May cause irritation of the mouth, throat, esophagus and stomach.
<b>Inhalation</b>	May cause irritation of the throat, nose and lungs.
<b>EFFECTS OF OVER-EXPOSURE</b>	None known.

### SECTION 4 - FIRST-AID MEASURES

<b>Skin</b>	Immediately remove any contaminated clothing. Wash contaminated area thoroughly with soap and copious amounts of water for at least 15 minutes. If irritation or adverse symptoms develop, seek medical attention.
<b>Eyes</b>	Remove any contact lenses at once. Flush eyes with water for at least 15 minutes. Ensure adequate flushing by separating the eyelids with fingers. If irritation or adverse symptoms develop, seek medical attention.
<b>Ingestion</b>	Rinse mouth thoroughly with water, then drink copious amounts of water. Do not induce vomiting. Call a physician or local Poison Control Center. Follow the physician's or the Poison Control Center's instructions.
<b>Inhalation</b>	Remove to fresh air, if coughing, breathing becomes labored, irritation develops or other symptoms develop, seek medical attention at once, even if symptoms develop several hours after the exposure.

### SECTION 5 - FIRE-FIGHTING MEASURES

<b>FLASH POINT</b>	187°F (86°C), Seta Closed Cup
<b>FLAMMABLE LIMITS</b>	Not established.
<b>AUTOIGNITION POINT</b>	Not established.
<b>EXTINGUISHING MEDIA</b>	Water fog or spray. Do not use high pressure water as it may spread product from broken containers increasing the fire hazard. Dry chemical, foam and carbon dioxide are also suitable.
<b>SPECIAL FIRE FIGHTING PROCEDURES</b>	Evacuate all non-essential personnel. Water from a safe distance - preferably with a fog nozzle. Firefighters should be equipped with protective clothing and SCBA's. In case of fire near storage area, cool the containers with water spray. Prevent contaminated water from entering waterways, dike fire water for later disposal.
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS</b>	Product will thermally decompose giving of flammable decomposition products, which can ignite and explode under confinement. The heat of decomposition of the peroxides will also add to the heat of the fire. Product burns violently.

**NOROX<sup>®</sup> 415****SECTION 6 - ACCIDENTAL RELEASE MEASURES****STEPS TO BE TAKEN IN EVENT OF SPILL OR RELEASE**

Eliminate potential ignition sources. Follow exposure controls and personal protection guidelines listed in Section 8. Dike spill to prevent runoff from entering drains, sewers, streams, etc. Wet spilled material with water and absorb with an inert absorbent material such as perlite, vermiculite, or sand. Extinguish potential ignition sources. Sweep up using non-sparking tools and place in a clean polyethylene drum or a polyethylene pail. Treat any contaminated cardboard packaging as hazardous waste. **Wet container contents with additional water prior to sealing.** Flush the spill area with mild detergent and water.

**SECTION 7 - HANDLING AND STORAGE****HANDLING**

Rotate stock using the oldest material first. Avoid contact with skin, eyes and clothing. Use PPE as specified in Section 8. Keep containers closed to prevent contamination. Keep away from sources of heat, sparks or flame. Do not add to hot solvents or monomers as a violent decomposition and/or reaction may result. Keep in original container. **DO NOT USE NEAR FOOD OR DRINK.** Wash thoroughly after handling.

**STORAGE**

Refrigeration is required, cool storage at 50°F (10°C) or below is recommended for longer shelf life and stability. Prolonged storage at elevated temperatures of 68°F (20°C) and higher will cause product degradation, gassing and potential container rupture which can result in a fire and/or explosion. Store out of direct sunlight in a well ventilated area away from potential ignition sources and combustible and incompatible materials. **DO NOT STORE WITH FOOD OR DRINK.** Refer to NFPA 432 Code for the Storage of Organic Peroxide Formulations from the National Fire Protection Association for additional storage information.

**OTHER PRECAUTIONS**

Unmixed, uncontaminated material, remaining at the end of the day, shall be returned to a proper organic peroxide storage area. Under no circumstances should material be returned to the original container.

**SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION****VENTILATION**

Mechanical, general, if particle use local mechanical exhaust.

**RESPIRATORY PROTECTION**

If airborne concentrations are expected to exceed acceptable levels wear a NIOSH/MSHA approved air-purifying respirator with an organic vapor cartridge or canister. When using respirators refer to OSHA's 29CFR 1910.134.

**EYE PROTECTION**

Safety goggles recommended. Permanent eyewash is highly recommended.

**HAND PROTECTION**

Protective gloves recommended, solvent resistant, such as butyl rubber, nitrile or neoprene.

**OTHER**

A safety shower and eyewash is recommended when the risk of a significant exposure exists.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES****APPEARANCE AND ODOR:**

Clear, colorless liquid with a slight mint-like odor.

**BOILING POINT:**

Not established.

**SPECIFIC GRAVITY:**

~ .95 @ 25°C

**VAPOR PRESSURE:**

Not established.

**FLASH POINT:**

>187°F (86°C), Seta CC

**VAPOR DENSITY:**

> 1

**FLAMMABLE LIMITS:**

Not established.

**EVAPORATION RATE:**

Not established.

**SADT:**

~ 40°C (104°F)

**% VOLATILE BY VOLUME:**

Not established.

**pH:**

NE

**SOLUBILITY IN WATER:**

Not miscible with water.

**SECTION 10 - STABILITY AND REACTIVITY****STABILITY**

Stable when kept in original, closed container, out of direct sunlight at temperatures below 68°F (20°C).

**CONDITIONS TO AVOID**

Contamination. Direct sunlight. Open flames. Prolonged storage above 68°F (20°C). Storage above SADT. Storage near flammable or combustible materials.

**MATERIALS TO AVOID**

Dimethylaniline, cobalt naphthenate and other promoters, promoted resins, accelerators, oxidizing and reducing agents, strong acids, bases, metals, metal alloys and salts, amines or any hot material.

**NOROX<sup>®</sup> 415****HAZARDOUS DECOMPOSITION PRODUCTS**

Decomposition products are flammable. Acrid smoke and irritating fumes. May produce 2-ethylhexanoic acid; heptane; 2,5-dihydroxy-2,5-dimethylhexane; acetone; carbon dioxide, carbon monoxide.

**HAZARDOUS POLYMERIZATION**

Will not occur.

**SECTION 11 - TOXICOLOGICAL INFORMATION****2,5-Dimethyl-2,5-di(2-ethylhexanoylperoxy)hexane****Hazard Data:**

**Inhalation:** Rat--LC<sub>50</sub>: >800 mg/l/4hr

**Dermal:** Unknown--LD<sub>50</sub>: >2000 mg/kg

**Oral:** Rat--LD<sub>50</sub>: >12900 mg/kg

**SECTION 12 - ECOLOGICAL INFORMATION**

The product should be prevented from entering drains, sewers, streams, etc.

**Aquatic toxicity**

Potentially dangerous to aquatic ecosystems.

**Environmental Fat**

Readily biodegradable.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

Prevent material from entering drains, sewers, streams, etc.

Immediately dispose of waste material at a RCRA approved hazardous waste management facility in accordance with federal, state and local regulations.

**SECTION 14 - TRANSPORT INFORMATION**

<b>DOT Shipping Name:</b>	ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED (2,5-DIMETHYL-2,5-DI(2-ETHYLHEXANOYLPEROXY)HEXANE, ≤100%)
<b>DOT Hazard Class:</b>	5.2
<b>UN/NA ID No.:</b>	UN3113
<b>DOT Packing Group:</b>	PG II
<b>Control Temperature:</b>	+20°C (68°F)
<b>Emergency Temperature:</b>	+25°C (77°F)
<b>Labels:</b>	5.2 (Organic Peroxide)
<b>2004 ERG GUIDE NO.:</b>	148

**SECTION 15 - REGULATORY INFORMATION**

The following chemicals are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Percent</u>
None		

**Canadian Domestic Substances List (DSL)**

The ingredients in this product are listed in the Canadian DSL Inventory.

**Chinese Inventory of Existing Chemical Substances Manufactured or Imported in China (IECSC)**

The ingredients in this product are listed in the Chinese IECSC Inventory.

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

The ingredients in this product are listed in the European EINECS Inventory.

**US Toxic Substances Control Act (TSCA)**

The ingredients in this product are listed in the US TSCA Inventory.

**Status of Carcinogenicity**

Not recognized as a carcinogen by the IARC, NTP or OSHA.

**NOROX<sup>®</sup> 415****SECTION 16 - OTHER INFORMATION**

**NFPA 432 Organic Peroxide Classification**  
Class III

**NFPA 704 Rating**

<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>
0	3	2

**HMIS Rating**

<u>Health</u>	<u>Flammability</u>	<u>Reactivity</u>
1	2	2

**MSDS Reference:** Norox 415 MSDS 0709

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